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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,372	03/09/2001	Kenji Kubomura	KUBOMURA-I	2532

1444 7590 10/23/2002

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WASHINGTON, DC 20001-5303

EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

8

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,372

Applicant(s)

KUBOMURA ET AL.

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example in claim 1, line 3, it recites "sheets woven by one kind or more than reinforced fibers", but it should read "sheets woven from one kind or more of reinforced fibers." In lines 4-6, "controlled to be reduced" and "two kinds or more than of reinforced fibers" are two more instances where the English is hard to understand. However, it is recognized that these instances are not only present in claim 1, but also all the claims.

Independent claims 1 and 4 recite a composite material having a "reduced" coefficient of linear expansion. What is the coefficient of linear expansion compared to in saying that it is reduced?

The claims also recite "reinforced fibers". What is a reinforced fiber? Does the fiber comprise a reinforcing element? If so, what is it? Or does it refer to a higher modulus fiber or high-strength fiber?

Claim 3 recites "said coefficient of linear expansion is reduced by combining sheets woven by one kind or more than reinforced fibers of which a coefficient of linear expansion is controlled by a three dimensional structure of twisting yarn, biaxial textile, or triaxial textile." Is the coefficient of linear expansion reduced by the structure of twisting yarn, biaxial textile, or triaxial textile? Or is the coefficient reduced due to the fiber that makes up the yarn or textile?

Claims 5 and 8-11 fail to further limit the parent claims from which they depend upon. For example, claim 5 recites the exact same preamble as claim 1 followed by "selected from the material claimed in claim 1." The same reasoning applies to claims 8-11. It is also noted that claims 8 and 11 are exactly the same because both depend from claim 7.

It is unclear as to what claims 6 and 12-20 are trying to claim. Is it claiming the quasi-isotropic fiber reinforced resin composite material can be formed from yarn prepreg, one-way prepreg, biaxial textile, triaxial textile, four axial textile, or a prepreg formed by those textiles? If this is supposed to represent a Markush claim, it is in improper form. Is a four axial textile a quadriaxial textile? How is the coefficient of linear expansion controlled?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyandera et al. (U.S. Patent No. 4,446,191).

Although the language of the claims currently makes it difficult to clearly perceive what Applicant's invention is, Miyandera et al. disclose what Examiner believes to be Applicant's invention. Miyandera et al. teach a heat resistant laminate with a low expansion coefficient (column 1, lines 5-7). The laminate is made from composite fabrics comprising 30-95% by weight of aromatic polyamide and 5-70% by weight of glass fibers (column 1, lines 41-47). The glass fibers have a positive coefficient of thermal expansion, but the aromatic polyamide fibers control the thermal expansion of the composite because they have a negative coefficient of thermal expansion. The composite fabric may be woven (column 1, line 64). The weave may be made from alternating one by one aromatic polyamide fiber and glass fiber (column 2, lines 4-7). Also, the weave may be formed from twisting fibers of aromatic polyamide and glass together into a yarn, then weaving the yarn (column 2, lines 8-27). The composite fabrics are then impregnated with a resin (column 3, lines 31-36), and optionally made into a prepreg by incorporating hardener with the resin (column 3, lines 42-45).

Conclusion

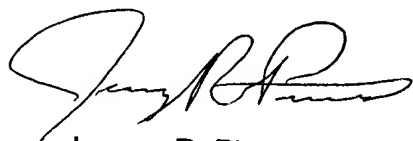
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703)

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605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

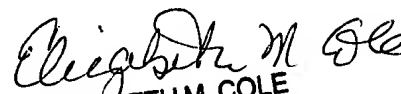
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce
Examiner
Art Unit 1771

October 17, 2002



ELIZABETH M. COLE
PRIMARY EXAMINER